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(71) Applicant *(for all designated States except US)*: **ASML Netherlands B. V.** [NL/NL]; De Run 6501, NL-5504 DR Veldhoven (NL).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **VAN DER LAAN, Hans** [NL/NL]; Olmebeek 6, NL-5501 CL Veldhoven (NL). **CARPAIJ, Rene, Hubert, Jacobus** [NL/NL]; Schoonveldsingel 44, NL-5262 XN Vught (NL). **CRAMER, Hugo, Augustinus, Joseph** [NL/NL]; Diepmeerven 72, NL-5646 HB Eindhoven (NL). **KIERS, Antoine, Gaston, Marie** [NL/NL]; Lei 53, NL-5501 DW Veldhoven (NL).

(74) Agent: **VAN WESTENBRUGGE, Andries**; Nederlandsch Octrooibureau, P.O. Box 29720, NL-2502 LS The Hague (NL).

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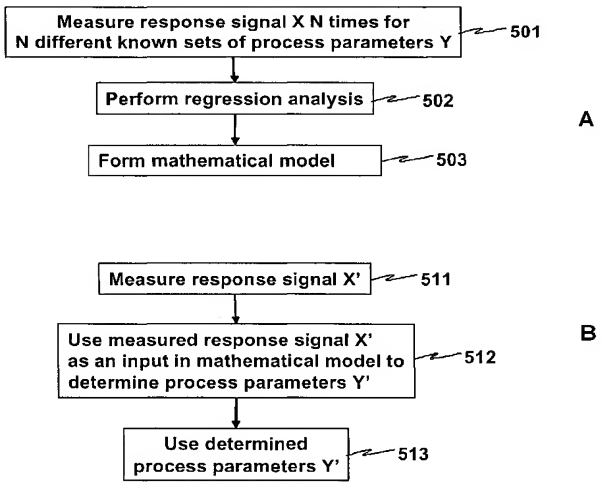
(54) Title: METHOD TO DETERMINE THE VALUE OF PROCESS PARAMETERS BASED ON SCATTEROMETRY DATA



(57) Abstract: A method according to an embodiment includes obtaining calibration measurement data, with an optical detection apparatus, from a plurality of marker structure sets provided on a calibration substrate. Each marker structure set includes at least one calibration marker structure created using different known values of the process parameter. The method includes obtaining measurement data, with the optical detection apparatus, from at least on marker structure provided on a substrate and exposed using an unknown value of the process parameter; and determining the unknown value of the process parameter from the obtained measurement data by employing regression coefficients in a model based on the known values of the process parameter and the calibration measurement data.

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